



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200
Fax 613 632-5246

Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
P0041958	MES002-VC	1	1	Net 60	M17-4-H900-B0.750X3.500	17-4 SS H900 Bar 0.750" X 03.500" ; MATERIAL: 17-4 PH/ TYPE 630/ S17400 SS BAR SPEC'S AMS 5604 OR AMS 5643 OR ASTM A693 OR ASTM 564 H900 MIN YIELD TENSILE STRENGTH 170 KSI / MIN ULTIMATE TENSILE STRENGTH 190 KSI receive ft				13	12/21/2018	13		S140972	Stock	12/21/2018	\$ 149.95 / ft	10		\$1,986.84	Metaux Solutions
		2			MT-HRS-B-1.250X2.500	Hot Rolled Steel Bar 1.250" W X 2.500" H MATERIAL: AS PER ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018				6	12/12/2018	6		S140973	Stock	12/21/2018	\$ 25.35 / ft	10		\$152.10	Metaux Solutions
		3			M304TS0.750W.049	304 Sq Tube .75X.75X.049W MATERIAL: AISI 304/316 SEAMLESS STAINLESS STEEL SQUARE TUBING AS PER ASTM A554 MILL FINISH OR ASTM A269 MILL FINISH receive ft				600		600		S140974	Stock	12/21/2018	\$ 3.80 / ft	10		\$2,280.00	Metaux Solutions
										Total:		619								\$3,244.92	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041958**

Supplier: MES002-VC
Metaux Solutions
2625 boul Jacques-Cartier Est
Longueuil
QC
J4N 1L7 Canada
Phone: 800 558 8858
Fax: 514 633 8044

PO No: PO041958

PO Date: 12/5/18

Due Date: 12/12/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

E-MAILED
DEC 06 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pynt Terms: Net 60

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	✓ A1	M17-4-H900-B0.750X3.500		17-4 SS H900 Bar 0.750" X 03.500" : MATERIAL: 17-4 PH/ TYPE 630/ S17400 SS BAR SPEC'S AMS 5604 OR AMS 5643 OR ASTM A693 OR ASTM 564 H900 MIN YIELD TENSILE STRENGTH 170 KSI / MIN ULTIMATE TENSILE STRENGTH 190 KSI receive ft	Firmed	-	12/12/18	12 ft	0 ft ✓ 13.25	12 ft A1 18/12/31	\$149.95/ft	\$1,799.40
2	✓ A1	MT-HRS-B-1.250X2.500		Hot Rolled Steel Bar 1.250" W X 2.500" H MATERIAL: AS PER ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018	Firmed	-	12/12/18	6 ft	0 ft ✓ 6.54	6 ft A1 18/12/31	\$25.35/ft	\$152.10



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041958**

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	✓ M	M304TS0.750W.049		304 Sq Tube .75X.75X.049W : MATERIAL: AISI 304/316 SEAMLESS STEEL SQUARE TUBING AS PER ASTM A554 MILL FINISH OR ASTM A269 MILL FINISH receive ft	Firmed	-	12/12/18	600 ft	0 ft	600 ft	\$3.80/ft	\$2,280.00
											✓ 600ft	At 18/12/31

Grand Total: \$4,231.50

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 12/5/18 12:45 PM dart.lavoie.chantal

Shipping Order

21/12/2018

METAUX SOLUTIONS INC
2625 BOUL JACQUES CARTIER EST
LONGUEUIL, QUEBEC
J4N 1L7
Tel. : 450 641-3330

Order : 140392
Reference : 41958
Bid : 30267
Ship : PICK UP / PICK UP

Customer : 6323336

Ship To

DART AEROSPACE LTD
1270, ABERDEEN STREET
HAWKESBURY, ONTARIO
K6A 1K7

Same

Tel. : 1 613 632-3336

Item No.	Description	Qty	Qty. Delivered	B/O Qty
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
SF34312174	17-4PH COND. H900 .750 X 3.5 1 X 13.25' R/L *****	13.25	<u>13.25</u>	<u>0</u>
HF114212	HT: <u>430988</u> HRS FLA 1.250" X 2.50" 1 X 72" *****	6	<u>6</u>	<u>0</u>
SSQT34340494	HT: <u>S21450</u> 304 SQ TUBE .750 X .049 WALL 30 X 20' ***** HT: <u>TBK060596</u>	600	<u>600</u>	<u>0</u>

LIVRE
JP

27/12/18

Shipping : _____
Package No : _____
Merchandise Received: _____

Ref. : _____

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

Page 01 of 02

Certification Date
14-DEC-2018CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

46039-J

Invoice Number
T387054

PART NUMBER/NUMÉRO DE PIÈCE

511729

OLD TO: METAUX SOLUTIONS INC.

ENDU À:

2625 BOUL JACQUES CARTIER EST
LONGUEUIL QC J4N 1L7SHIP TO:
EXPÉDIÉ À:

METAUX SOLUTIONS (RIVE-SUD)

2625 BOUL JACQUES CARTIER EST
LONGUEUIL QC J4N 1Description: 17-4 HRAP BAR SOL ANN ASTM A564
3/4 X 3-1/2 FLAT X 12' R/L
HEAT: 430988 ITEM: 511729

Line Total: 118 LB

Specifications:

AMS 5643 V

SECTION II PT A

AMS H 6875 B 10

ASTM A484 TABLE 5 18

ASTM E112

AMS H 6875

ASTM A564 T630 13

AISI 630

ASTM A370 17

EN 10204 3.1 04

AMS 2315

AMS 2750

ASME SA564 T630 17*

AMS 2303 F

ASTM F899 (630) 12

ISO 10474 3.1 13

ASTM E340

CHEMICAL ANALYSIS

C	SI	MN	CR	MO	CU	NI	CO
0.037	0.40	0.50	15.36	0.25	3.36	4.61	0.037
P	S	N	TA	NBTA	CB		
0.024	0.002	0.039	0.001	0.282	0.281		

RCPT: R578334

COUNTRY OF ORIGIN : ITALY

MECHANICAL PROPERTIES

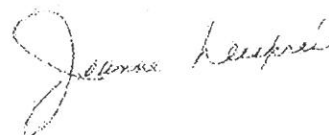
DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED IN AREA	HARDNESS BHN
COND A					343
DESCRIPTION	YLD STR KSI	ULT TEN KSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS BHN
DEV: H900 L	181.0	204.0	15.0	54.0	433

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du fabricant après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES

MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

Page 02 of 02

Certification Date
14-DEC-2018

CUSTOMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

Invoice Number
T387054

46039-J
PART NUMBER/NUMÉRO DE PIÈCE
511729

SOLD TO:	METAUX SOLUTIONS INC.	SHIP TO:	METAUX SOLUTIONS (RIVE-SUD)
RENDU À:	2625 BOUL JACQUES CARTIER EST LONGUEUIL QC J4N 1L7	EXPÉDIÉ À:	2625 BOUL JACQUES CARTIER EST LONGUEUIL QC J4N 1

Description: 17-4 HRAP BAR SOL ANN ASTM A564
3/4 X 3-1/2 FLAT X 12' R/L
HEAT: 430988

ITEM: 511729

Line Total: 118 LB

GRAIN SIZE :5 -

MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL
THERMAL TREATMENT: OK
MATERIAL SOLUTION ANNEALED 1905 DEG F FOR 1.5H,
AIR COOLED TO BELOW 90 DEG F
MACRO: OK
MICRO1: OK
AMS NO :2303
SEVERITY :0.16
FREQUENCY:0.32

COMMENTS

red. ratio= 153,2:1
material is dfars compliant
finished product is checked for radioactive contamination

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES



MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

METALOR INC.

650 BOUL. ARTHUR BAYVÉ, ST-JUSTE, Q.C. J7Z 6A9

Tél: 514 474-1121

Télécopieur / Fax administration: 450-491-4403

Télécopieur / Fax production: 450-491-6154

Certificat de Conformité Certificate of Compliance

NUMÉRO DE TRAVAIL order	CHARGEMENT load
332966	1

CLIENT / customer 796

METALUX SOLUTIONS

2626 BOUL. JACQUES-CARTIER EST

LONGUEUIL

QC J4B 6A8

LIVRÉ À / delivered to

METALUX SOLUTIONS

2626 BOUL. JACQUES-CARTIER EST

LONGUEUIL

QC J4B 6A8

COMMANDE DU CLIENT customer po	CLASSIFICATION PIÈCE part classification	MATÉRIEL material	MAÎTRE D'ŒUVRE owner contractor	PROCESSUS
40030	N/A	17-0PH		

SPÉCIFICATIONS DU PROCÉDÉ processing specifications

AGE HARDEN

CONDITION H 900

RIGIDITÉ / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	40 - 47 HRC	1	46 - 47 HRC

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
1	117	BARRES (1) BARRE 3.625" X 150.825" X .750" 1 NIL

COMMENTAIRES / comments

APPROUVÉ par / Approved by:

DATE: 2018-12-20

Dimitri Pichon
Chief Inspector



SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 17-4 PH / TYPE 630 / S17400 SS BAR
GRAIN MUST BE ALONG LENGTH OF BAR
MINIMUM YIELD STRENGTH PER TABLE
MINIMUM ULTIMATE STRENGTH PER TABLE

SPECIFICATION: AMS 5604 OR AMS 5643 OR ASTM A693 OR ASTM 564

PART NUMBER: M17-4-1 HHHH-B T.TTT X WW.WWW | COND THICK | WIDTH WHERE: HHHH SPECIFIES THE MATERIAL CONDITION (PER TABLE BELOW)
T.TTT SPECIFIES THE THICKNESS
WW.WWW SPECIFIES THE WIDTH

MATERIAL CONDITION TABLE:

CODE	CONDITION	MIN YIELD TENSILE STRENGTH (KSI)	MIN ULTIMATE TENSILE STRENGTH (KSI)
(OMITTED)	NONE SPECIFIED (CONDITION A NOT ACCEPTABLE)	100	150
H900	H900	170	190
H925	H925	155	170
H1025	H1025	145	155
H1075	H1075	125	145
H1100	H1100	115	140
H1150	H1150	105	135
CONDA	CONDITION A (SOLUTION TREATED)		

NOTES: MATERIAL IN H900 AND H925 CONDITION NOT RECOMMENDED FOR TENSION OR SHEAR APPLICATIONS IN COLD WEATHER CONDITIONS
MATERIAL IN H900 AND H925 CONDITION NOT RECOMMENDED FOR APPLICATIONS WHERE STRESS CORROSION CRACKING IS POSSIBLE
CONDITION A NOT TO BE USED IN DESIGN FOR FINAL PRODUCT AND SHOULD ALWAYS BE HEAT TREATED

EXAMPLES:

PART 0.250" X 4.000" BAR MIN UTS = 150 KSI, MIN YTS = 100 KSI
1.000" X 2.500" BAR H900 CONDITION
0.500" X 3.250" BAR H1025 CONDITION
0.750" X 2.500" BAR A CONDITION

RELEASED
11-2017-10-31
17-4-1

B	ADD MATERIAL CONDITION AND REFORMAT DRAWING	NO	17.09.14
A	NEW ISSUE	DS	02.04.18
REV.	DESCRIPTION	BY	DATE
DESIGN	NO		
DRAWN	NO		
CHECKED	CP		
MFG. APPR.	DD		
APPROVED	WM		
DE APPR.	CP		
DATE	17.09.14		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M17-4-B			
REV. B			
SHEET 1 OF 1			
TITLE 17-4 SS BAR			
SCALE			
NTS			
COPYRIGHT © 2003 BY DART AEROSPACE LTD.			

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M 17-4-H900-B 0.750x3.500

PO / BATCH NO.: P0041958/5140972

DATE: 18/12/31

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.750"

QUANTITY RECEIVED: 13.25 Ltr

THICKNESS RECEIVED: 0.750"

QUANTITY INSPECTED: 13.25 Ltr

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	AMS 5643
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	Lot: 430988
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 61</u> DATE: <u>18/12/31</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



Kentucky Electric Steel

PO Box 2119
Ashland, Kentucky 41105-2119

ID: #1920 Page 4 sur 5

Email: www.kentuckyelectricsteel.com

Phone: (808) 929-1200 Toll Free: (800) 333-3012

Fax: (608) 929-1219

HIP TO: 9'

PAGE 1

METALLURGICAL TEST REPORT

We hereby certify that these Chemical and/or Test results are correct as contained in the records of Kentucky Electric Steel, LLC.

By William L. Compton, Q.C. Manager

SOLD TO:

Purchase Order No. 31362

Mill Order No. 28718

Item No. 0001

Invoice No.

Size 1 1/4 X 2 1/2 S.E.

Grade 44 W

Shipper No6130

Date: 4/20/2010

SHIPPER SEQ 46

16:20:27

METRIC: THICKNESS 32.0000MM WIDTH 64.0000MM REDUCTION RATIO 6.480

HEAT NO.	C	Fe	P	S	Si	Cu	Mn	Cr	Mo	Sn	Al	V	Ni	Ti	B	Ca	N
S21450	.16	1.04	.008	.020	.28	.19	.09	.08	.02	.010	.000	.038	.000				
HEAT NO. S21450	BNH	DNH	BNH	DECRB			C *A*	L *B*	E *C*	A *D*	N	L	I	N	E	S	S

HEAT NO.	501 Start PST	502 Through PST	503 End PST	504 Start PST	505 Through PST	506 End PST	507 Start PST	508 Through PST	509 End PST	510 Start PST	511 Through PST	512 End PST	513 Start PST	514 Through PST	515 End PST
S21450	59700	81400	40			57400	79500	41							

END QUENCH HARDENABILITY TEST RESULTS - DISTANCE IN 141PS														
HEAT NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14

Peruch
a
~~1~~ 1 1/4 x 2
Juan

14 x 2 x 2

Bradford
 over
 $1\frac{1}{4} \times 2\frac{1}{2}$
 June 2010

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL:

SPECIFICATION:

PART NUMBER:

EXAMPLE:

HOT ROLLED STEEL BAR

ASTM A36 OR ASTM A1011 OR 44W OR ASTM A1018

MT-HRS-B-[W.WWW]x[H.HHH]

WHERE W.WWW IS BAR WIDTH IN INCHES

WHERE H.HHH IS BAR THICKNESS IN INCHES

MT-HRS-B-2.000x0.250

TOLERANCES PER MANUFACTURER SPECIFICATIONS



DART AEROSPACE		Hawthorn, Ontario, Canada	
TITLE HOT ROLLED STEEL BAR			
DWG NO.		REV	
MT-HRS-B		B	
DESIGN BY:	SAC 07/09/2017	XXX-1 205	FRACTIONS 1/16
DRAWN BY:	SAC 09/26/2017	XX-1 01	ANGLES 5°
CHECKED:	VM 09/27/2017	1	UNLESS OTHERWISE SPECIFIED
MFG. APPR:	DP 09/27/2017	2	UNLESS OTHERWISE SPECIFIED
APPROVED:	WM 10/05/2017	3	UNLESS OTHERWISE SPECIFIED
DATE:	26/09/2017	4	UNLESS OTHERWISE SPECIFIED
SCALE:	NTS	5	UNLESS OTHERWISE SPECIFIED
WEIGHT:	N/A	SHEET 1 OF 1	
COPYRIGHT © 2017 BY DART AEROSPACE LTD			

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-HRS-B-1.250x2.500
 DATE: 18/12/31

PO / BATCH NO.: P0041958/S140973

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 6.4t
 QUANTITY INSPECTED: 6.4t
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.250"
 THICKNESS RECEIVED: 1.250"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	44W
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	MT S21450
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

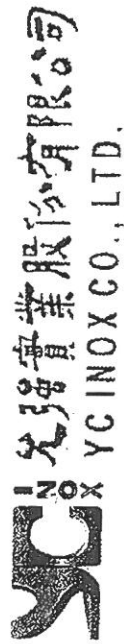
CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 61</u> DATE: <u>18/12/31</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

002336



INSPECTION CERTIFICATE

EN 10204-3.1:2004

No.270, Sec.4, Jungshan Rd., Shijou Shiang,
Chang-Hwa, Taiwan, R.O.C
http://www.ycinox.com
TEL : +886-4-8899666 FAX : +886-4-8899770



Customer	STAINLESS STEEL WELDED TUBE		Customer No.	FCA027	Certificate No.	180718P0113
Product	ASTM A554-16		Commercial Invoice No.	J18070022	Date of Issue	2018/07/18
Specification	MT-304		PO No.	P010185	Order No.	EP18050236-1
Steel Grade	Finish MILL		P.I.No.	PI 1805-151	Weight No.	C18070248

Item No.	Heat No.	Product Description	Quantity Pcs	Chemical Composition(%)											Tension Test				*01	
				C	Si	Mn	P	S	Ni	Cr	0.2% Y.S.	T.S.	E.L.	HRB						
Specification				Min.	80	100	200	45	30	1100	1800									
				Max.	54	42	106	33	2	811	1814									
1	TBK060596	3/4" (19mm) x 3/4" (19mm) x 0.049" (1.25mm) x 20FT	200	54	42	106	33	2	811	1814	294	674	58	87						
2	TBK060834	1" (25.4mm) x 1" (25.4mm) x 0.12" (3.05mm) x 20FT	100	54	45	107	31	2	804	1821	308	672	53	85						
3	TBK062680	1 1/4" (31.8mm) x 1 1/4" (31.8mm) x 0.12" (3.05mm) x 20FT	25	44	45	82	33	2	809	1801	277	638	55	83						
4	TBK053580	1 1/2" (38.1mm) x 1 1/2" (38.1mm) x 0.12" (3.05mm) x 20FT	42	54	45	107	31	2	804	1821	308	672	53	85						
5	TBK071170	1 1/2" (38.1mm) x 1 1/2" (38.1mm) x 0.12" (3.05mm) x 20FT	83	24	52	163	29	1	800	1810	292	648	55	86						
6	TBK061191	2" (50.8mm) x 2" (50.8mm) x 0.12" (3.05mm) x 20FT	30	54	45	107	31	2	804	1821	308	672	53	85						
7	TBK061209	2" (50.8mm) x 2" (50.8mm) x 0.12" (3.05mm) x 20FT	90	44	45	86	38	3	807	1831	268	627	56	81						
8	TBK062452	2" (50.8mm) x 2" (50.8mm) x 0.12" (3.05mm) x 20FT	30	44	45	82	33	2	809	1801	277	638	55	83						
9	TBK051018	2" (50.8mm) x 2" (50.8mm) x 0.180" (4.57mm) x 20FT	20	22	38	139	20	3	803	1821	299	640	55	83						
10	TBK051809	2" (50.8mm) x 2" (50.8mm) x 0.180" (4.57mm) x 20FT	30	20	40	140	34	1	804	1814	308	643	54	84						
11	TBK060322	2" (50.8mm) x 2" (50.8mm) x 0.250" (6.35mm) x 20FT	15	44	48	87	31	4	813	1810	297	612	57	84						
12	TBK041093	2 1/2" (63.5mm) x 2 1/2" (63.5mm) x 0.180" (4.57mm) x 20FT	10	44	48	87	31	4	813	1810	297	612	57	84						
13	TBK041092	2 1/2" (63.5mm) x 2 1/2" (63.5mm) x 0.250" (6.35mm) x 20FT	10	22	40	142	29	3	808	1813	322	649	54	88						
14	TBK020282	3" (76.2mm) x 3" (76.2mm) x 0.12" (3.05mm) x 20FT	15	53	55	87	33	2	811	1820	283	632	54	83						
15	TBK070341	3" (76.2mm) x 3" (76.2mm) x 0.12" (3.05mm) x 20FT	15	45	47	86	32	2	804	1808	318	648	54	86						
16	TBK051779	4" (101.6mm) x 4" (101.6mm) x 0.12" (3.05mm) x 20FT	20	40	40	140	34	1	804	1814	308	643	54	84						
17	TBK040233	4" (101.6mm) x 4" (101.6mm) x 0.12" (3.05mm) x 20FT	6	47	42	90	35	6	812	1819	270	617	56	80						
18	TBK061999	4" (101.6mm) x 4" (101.6mm) x 0.12" (3.05mm) x 20FT	9	44	52	86	38	3	807	1831	268	627	56	81						
19	TOTAL:			760																

Surveyor By	We hereby certify that material described herein has been manufactured and tested with satisfactory results in accordance with the requirement of the above material specification. The material described above has been found free of radiation by raw material supplier.		Visual Inspection(Surface) and Dimension Check : OK	1.ISO 9001:2015 (No.01 100 056299) 2.PED / AD2000 (No.01 202 TWN/Q-05 0105) 3.ISO 14001:2004 (No.01 104 822 096385) 4.OHSAS 18001:2007 (No.01 113 822 096385)	Manager of Quality Assurance Department
N/A					Jay Chen


Note

Tensile test value references to raw material.
Hardness test value references to raw material.

*01= Hardness Test
*Gauge Length: 50mm

1MPa=1N/mm²=10bar=145psi=10.2kg/cm²

PURCHASE MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBING

FINISH:  ASTM A554 MILL FINISH
OR ASTM A289 MILL FINISH

WHERE: A.AAA = WIDTH IN INCHES
.TTT = WALL THICKNESS IN INCHES

PART NUMBER: M304TS | A.AAA | W | .TTT |
| WIDTH | WALL |

PART NUMBER: EG. 0.75" X 0.75" X 0.049 WALL = M304TS0.750W.049

RELEASED
R 2014-05-26

D	"SEAMLESS" REMOVED FROM PURCHASE MATERIAL SPECIFICATION (SEE NCR14-3816)		DB	14.05.20
C	"SEAMLESS" ADDED TO PURCHASE MATERIAL ASTM A289 ADDED TO FINISH REASON: SPEC ADDED FOR 1/2" TUBING		AJS	09.10.16
B	DRAWING MOVED TO "B" SIZE BORDER FINISH ADDED (SEE NCR 09-045 FOR DETAILS)		AJS	08.08.28
A	NEW ISSUE		DS	01.08.08
REV.	DESCRIPTION		BY	DATE
DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN	DB			
CHECKED	DB			
MFG. APPR.	DB			
APPROVED	DB			
DE APPR.	DB	REV. D SHEET 1 OF 1		
DATE		14.05.20		SCALE NONE
		TITLE 304/316 SQUARE TUBING		COPYRIGHT © 2011 BY DART AEROSPACE LTD ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304T50.750W.049
 DATE: 18/12/31

PO / BATCH NO.: P0041958 / S140974

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 600.54
 QUANTITY INSPECTED: 600.54
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.750"
 THICKNESS RECEIVED: 0.750"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	ASTM A554
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	MT: TBK060596
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.
 RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 61</u> DATE: <u>18/12/31</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in